

Julie Alhosh

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🌐 juliealhosh.github.io/

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EDUCATION

- MSc in Computer Science**, Mobile Robotics Lab at McGill University SEP 2022 – DEC 2024
- Thesis: Learning-Based Active Sampling and Modeling of Aquatic Environments CGPA: **4.0/4.0**
 - Supervisor: Prof. David Meger
- BSc in Honours Mathematics and Computer Science**, McGill University SEP 2018 – APR 2021
- First Class Honours and distinction CGPA: **3.87/4.0**

EXPERIENCE

- Robotics Research**, *Graduate Researcher*, McGill University JUN 2023 – PRESENT
- Built “BoatGym”, a Gymnasium environment for active sampling and mapping of aquatic phenomena
 - Trained DQN and PER-DDQN agents for adaptive sampling and modeling of water surface temperature
 - Worked on a computer vision project in an off-road mapless navigation pipeline
 - Supervisor: Prof. David Meger
- Teaching Experience**, *Teaching Assistant*, McGill University
- Artificial Intelligence (AI), COMP 424 SEP – DEC 2023
 - Computational Perception, COMP 546 SEP – DEC 2022
 - Programming Languages and Paradigms, COMP 302 SEP – DEC 2020
- Reinforcement Learning Research**, *Research Assistant*, McGill University SEP 2021 – MAY 2023
- Proved the convergence of the quantile imputation strategy and the statistical HJB loss function
 - Supervisor: Prof. David Meger
- Mathematical Research**, *Research Assistant*, McGill University MAY – AUG 2020, 2021
- Proved that Kontsevich’s flows on two-dimensional quasi-homogeneous Poisson structures are trivial
 - Supervisor: Prof. Brent Pym

TECHNICAL SKILLS AND CERTIFICATIONS

- Programming Languages:** Python, C/C++, Java, MATLAB
- Libraries and Frameworks:** NumPy, PyTorch, TensorFlow, Hydra, Matplotlib, ROS/ROS2
- Certification:** Trustworthy and Responsible AI Learning Certificate, Mila (MAR 2024)

PUBLICATIONS

- **Under Review:** **J. Alhosh**, J.-F. Tremblay, H. Wiltzer, E. Bodzay, L. Petit, and D. Meger. Active sampling, modeling and estimation in aquatic environments. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, Atlanta, USA, 2025
- **Under Review:** J.-F. Tremblay, **J. Alhosh**, L. Petit, F. Lotfi, L. Landauro, and D. Meger. Topological mapping for traversability-aware long-range navigation in off-road terrain. In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, Atlanta, USA, 2025

AWARDS AND SCHOLARSHIPS

- Excellence Bursary for Computer Science by the Ministère de l’Enseignement supérieur (\$1,000) JUN 2021
- ISM Undergraduate Summer Scholarship (\$5,000) MAY 2021
- NSERC Undergraduate Student Research Award (\$7,000) MAY 2020
- Heather Munroe-Blum Leadership Award (\$47,000) SEP 2018